February 27, March 2 Packet

Mr. Michael T. Davis Algebra II Delta & Eta	Exponential Growth – Chess Board Penny Activity February 27, 2015

Name:

Use of a chest board configuration to demonstrate the power of exponential growth

Suppose a friend agrees to give you pennies each day for 64 days. On the 1st day she gives you one penny, then on the 2nd day she give you twice as many pennies as she gave you on the previous day , then on the 3rd day she give you twice as many pennies as she gave you on the previous day, and so on.

Write a 1 in the 1st square to represent the 1st penny. Write a 2 in the 2nd square to represent the 2nd day's pennies. Write a 4 in the 3rd square to represent the 3rd day's pennies. Write an 8 in the 4th square to represent the 4th day's pennies. And so on, until you have completed the 64 days.

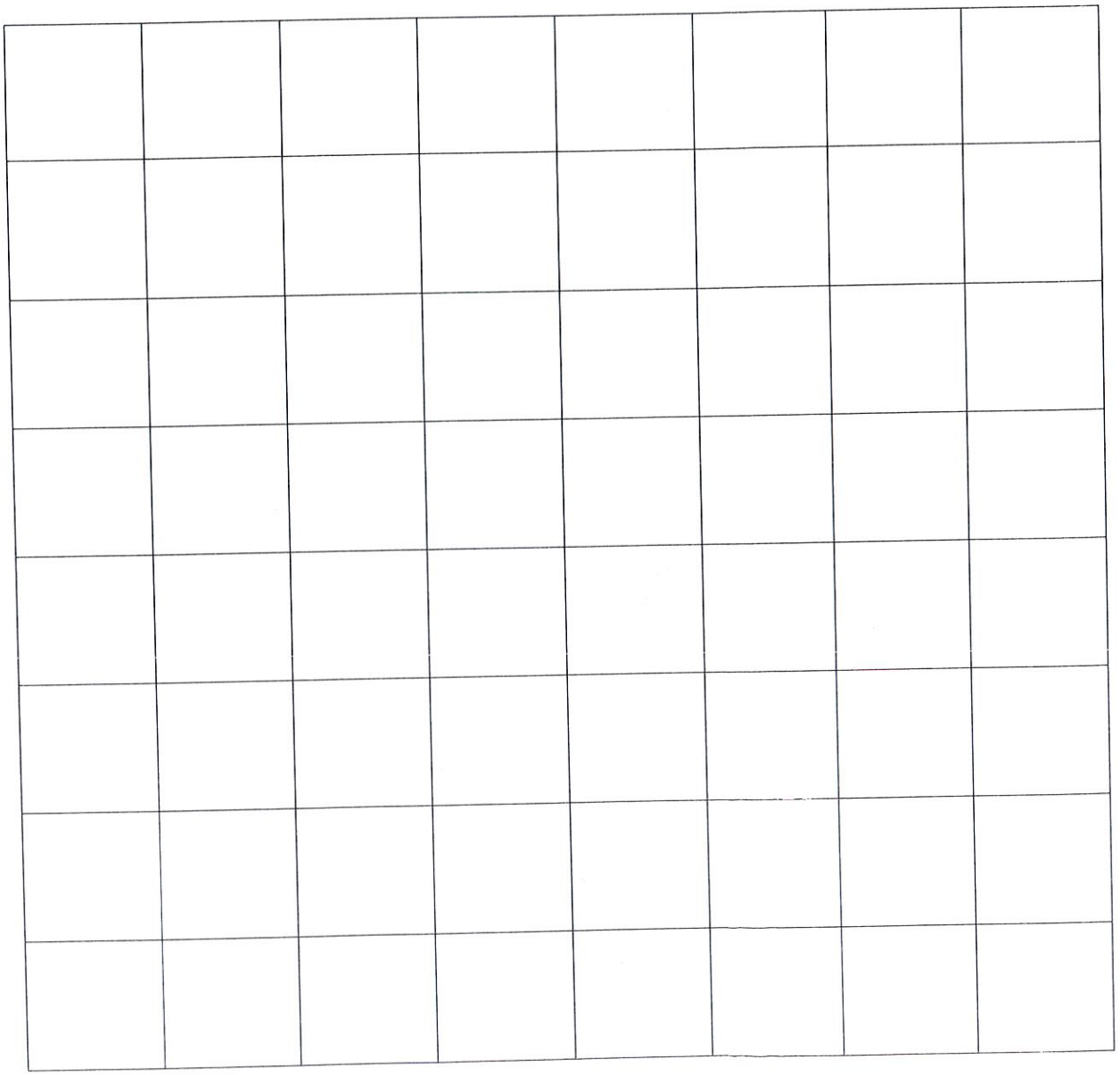
Mr. Michael T. Davis Algebra II Delta & Eta	Exponential Decay – Chess Board Money Activity February 27, 2015

Name:

Use of a chest board configuration to demonstrate the power of exponential decay

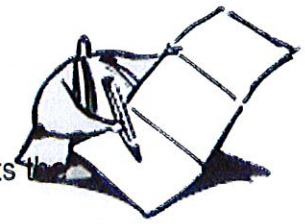
Suppose a friend agrees to give money each day for 64 days. On the 1st day he gives you $1,000, then on the 2nd day he gives you 90% as much as she gave you on the previous day, then on the 3rd day he gives you 90% as much as he gave you on the previous day, and so on.

Write a 1,000 in the 1st square to represent the 1st day's $ amount. Write a 900 in the 2nd square to represent the 2nd day's $ amount. Write an 810 in the 3rd square to represent the 3rd day's $ amount. And so on, until you have completed the 64 days.



Algebra 2
Introduction to Exponential Functions

Name:_____
Date: _____

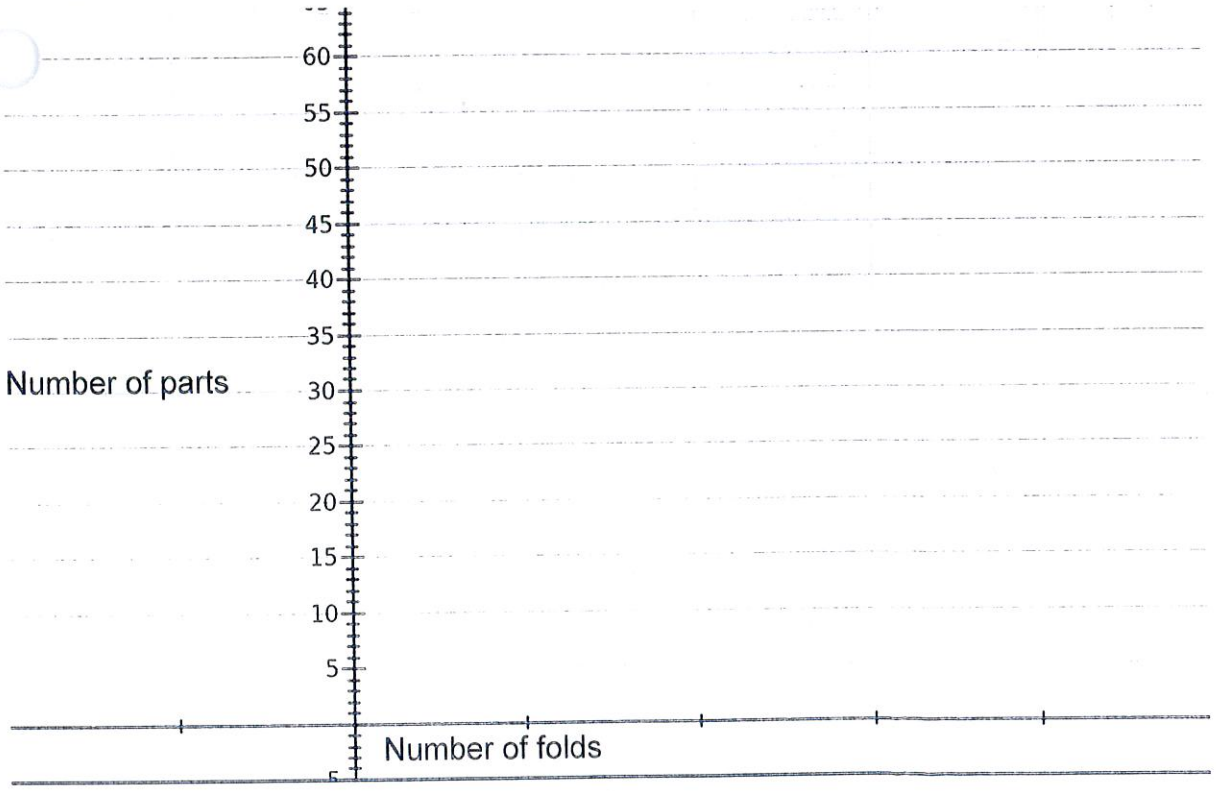


Paper Folding!

1) Take a piece of blank paper from the stack.
2) Fold the sheet of paper in half and record the number of parts the sheet has been divided into.
3) Continue folding and record the number of folds and parts in the table below.

Number of Folds	Number of Parts	Description of how you did it	Parts as powers of 2
0	1		
1			
3			
4			
5			
F folds			

Now graph your points as (numberoffolds, numberofparts)



What shape does the graph take?

What is the pattern in the number of parts formed?

What is the relationship between the number of folds and the number of parts the paper is divided into?

Exponential Functions – Multiplying Cells